BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN

2012-13: Number 12, Week 4

January 20 to 26, 2013

BC Centre for Disease Control
An agency of the Provincial Health Services Authority

Prepared by BCCDC Influenza & Emerging Respiratory Pathogens Team

Influenza activity in BC remains high

Contents:

Summary

Influenza activity in BC remained high in week 4 (January 20-26, 2013). During this week, the proportion of patients with influenza-like illness among those presenting to sentinel physicians continued to increase, and remained well above the expected range for this time of year. The proportion of medical visits with an influenza diagnosis appears to have reached a high plateau at the provincial level and in most Health Authorities. Compared to the previous week, fewer ILI outbreaks were received from long-term care facilities. For the fifth consecutive week, more than a third of the respiratory specimens tested at the BC Public Health Microbiology & Reference Laboratory were positive for influenza, predominantly A/H3N2. Among other viruses, respiratory syncytial virus continued to be the most common detection. Compared to the previous week, at the BC Children's and Women's Health Centre Laboratory, the influenza positive percentage increased slightly but was close to expected levels; and the consultations for influenza-like illness at BC Children's Hospital emergency room remained elevated.

Canadian interim mid-season estimates for influenza vaccine effectiveness were published earlier today. Results suggest that the 2012-13 vaccine reduces the risk of medically attended laboratory-confirmed influenza by about half, similar to interim estimates also recently published from the United States and United Kingdom (see links enclosed). The full Canadian report is available from: www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20394

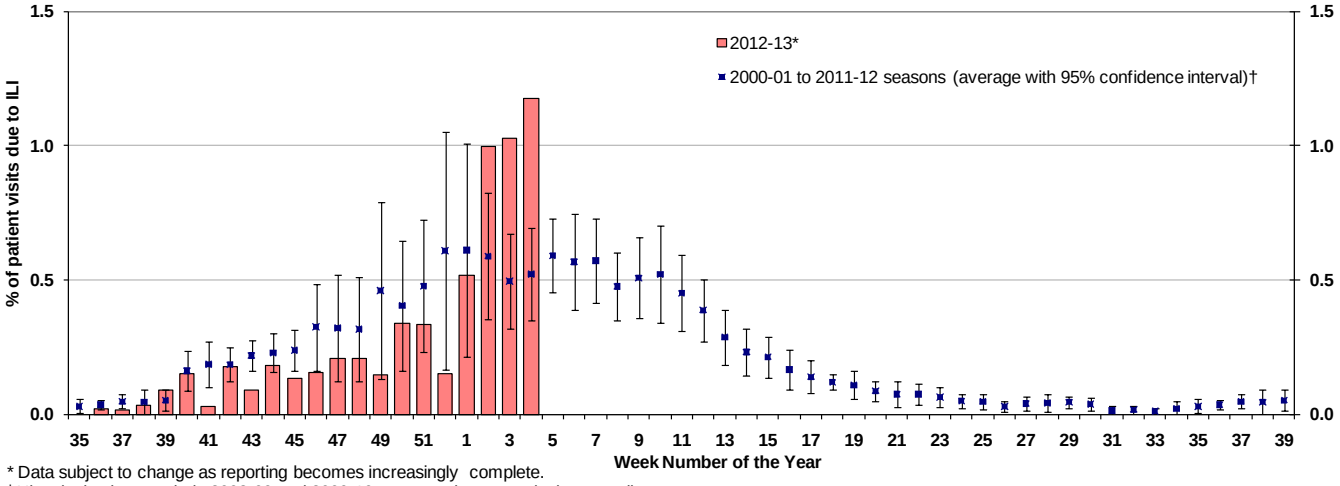
Report disseminated January 31, 2013
Contributors: Helen Guiyun Li, Lisan Kwindt, Naveed Janjua, Danuta Skowronski

British Columbia

Sentinel Physicians

In week 4, the proportion of patients with influenza-like illness (ILI) among those presenting to sentinel physicians continued to increase (1.2%), remaining above the expected range for this time of year. To date, 73% of sentinel physician sites have reported for week 4.

Percentage of Patient Visits due to Influenza Like Illness (ILI) per Week Compared to Average Percentage of ILI Visits for the Past 10 Seasons Sentinel Physicians, British Columbia, 2012-2013

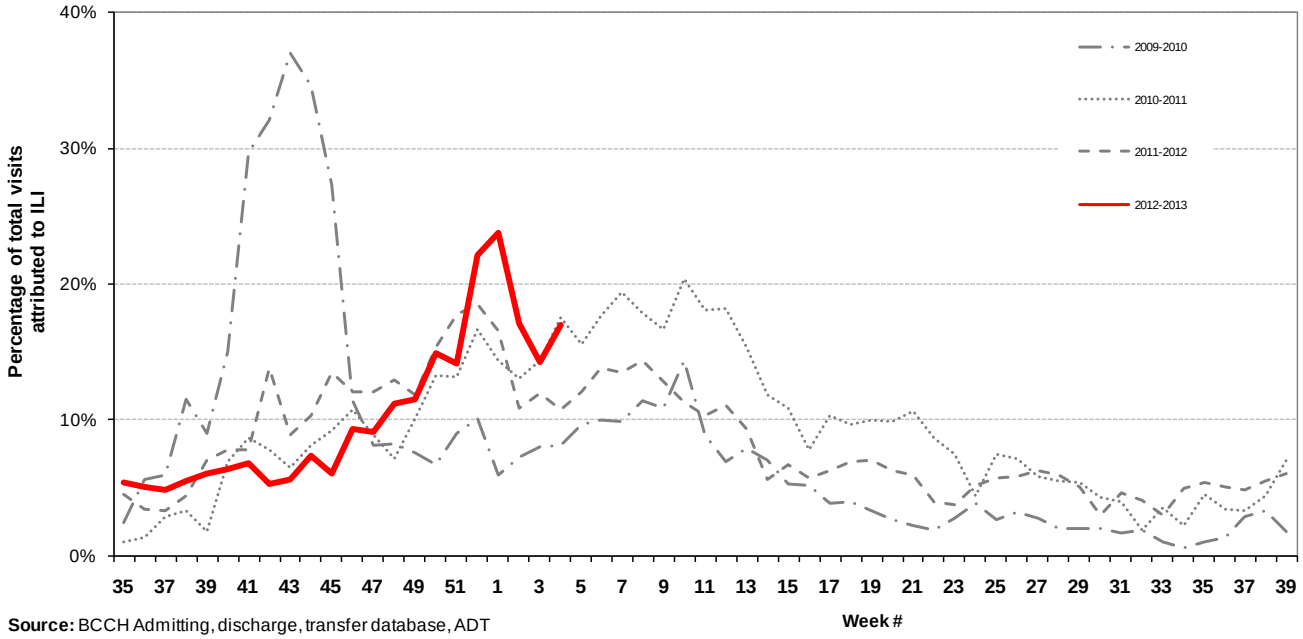


* Data subject to change as reporting becomes increasingly complete.
† Historical values exclude 2008-09 and 2009-10 seasons due to atypical seasonality.

BC Children's Hospital Emergency Room

The proportion of BC Children's Hospital ER visits attributed to "fever and cough" or flu-like illness was 17.0% in week 4, slightly higher than the previous week, but consistent with previous seasons.

Percentage of Patients Presenting to BC Children's Hospital ER with Presenting Complaint (Triage Chief Complaint) of "Flu," "Influenza," or "Fever/Cough", by Week

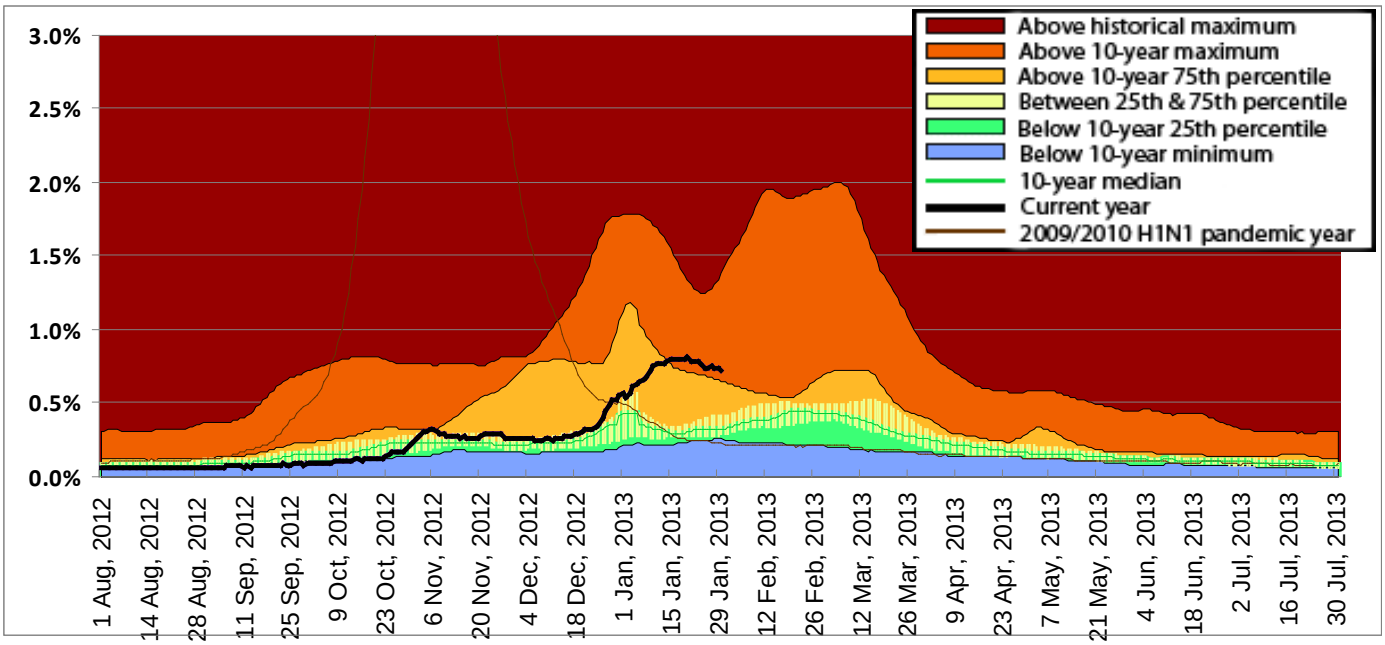


Source: BCCH Admitting, discharge, transfer database, ADT
Note: Data from 2010-11 and 2011-12 is based on new system (Triage Chief Complaint) not directly comparable to data for 2009-10. In bulletins before week 9 of 2011-12 season, data is based on old system.

Medical Services Plan

During week 4, influenza illness as a proportion of all submitted BC Medical Services Plan (MSP) claims peaked and began to show signs of decline at the provincial level and in most Health Authorities, but still remained above the 10-year maximum at the provincial level and in Fraser and Vancouver Coastal Health Authorities. Only in Northern Health has the rate been steadily declining over the last few weeks, and is now approaching the 10-year median level in week 4 (noting variability around those classifications per below).

Influenza Illness Claims* British Columbia



* Influenza illness is tracked as the percentage of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza).
Data provided by Population Health Surveillance and Epidemiology, BC Ministry of Health Services
Notes: MSP week beginning 1 August 2012 corresponds to sentinel ILI week 31; Data current to 30 January 2013.

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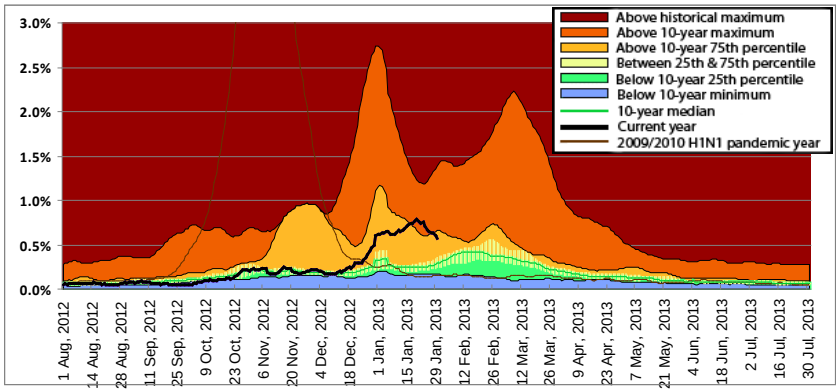
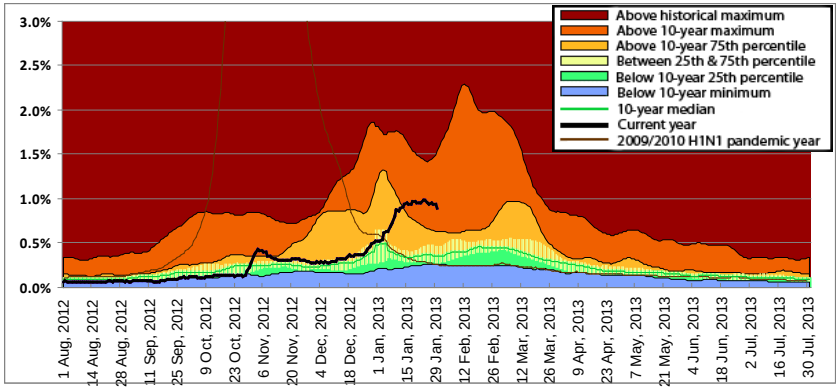
2012-13: Number 12, Week 4

January 20 to 26, 2013

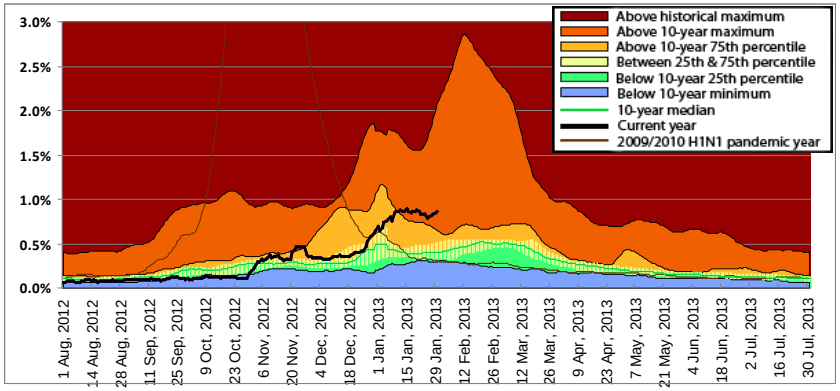
Interior



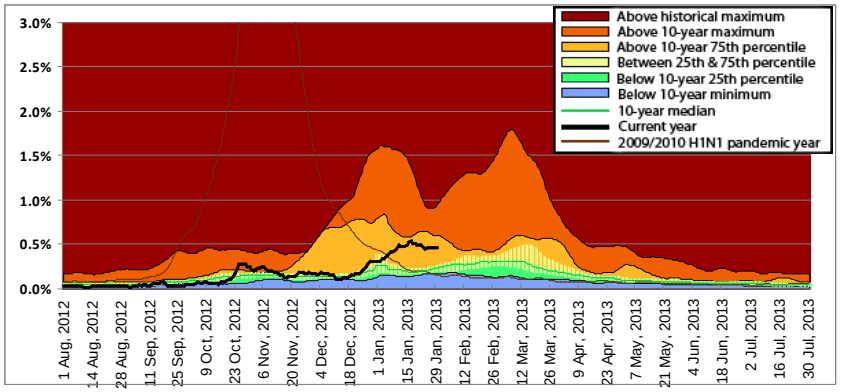
Fraser



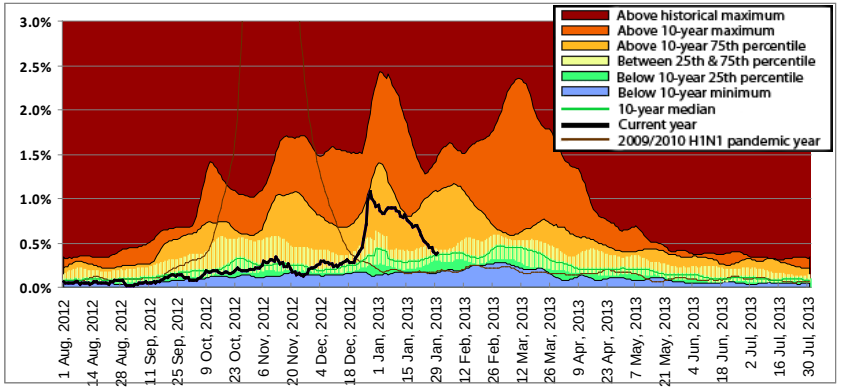
Vancouver Coastal



Vancouver Island

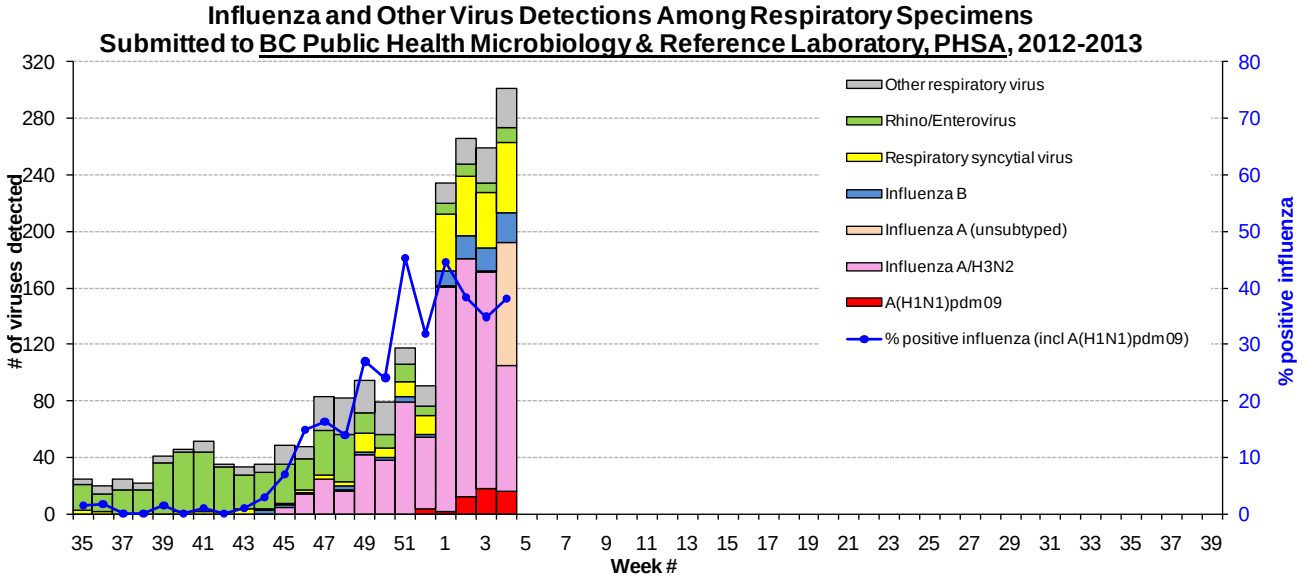


Northern

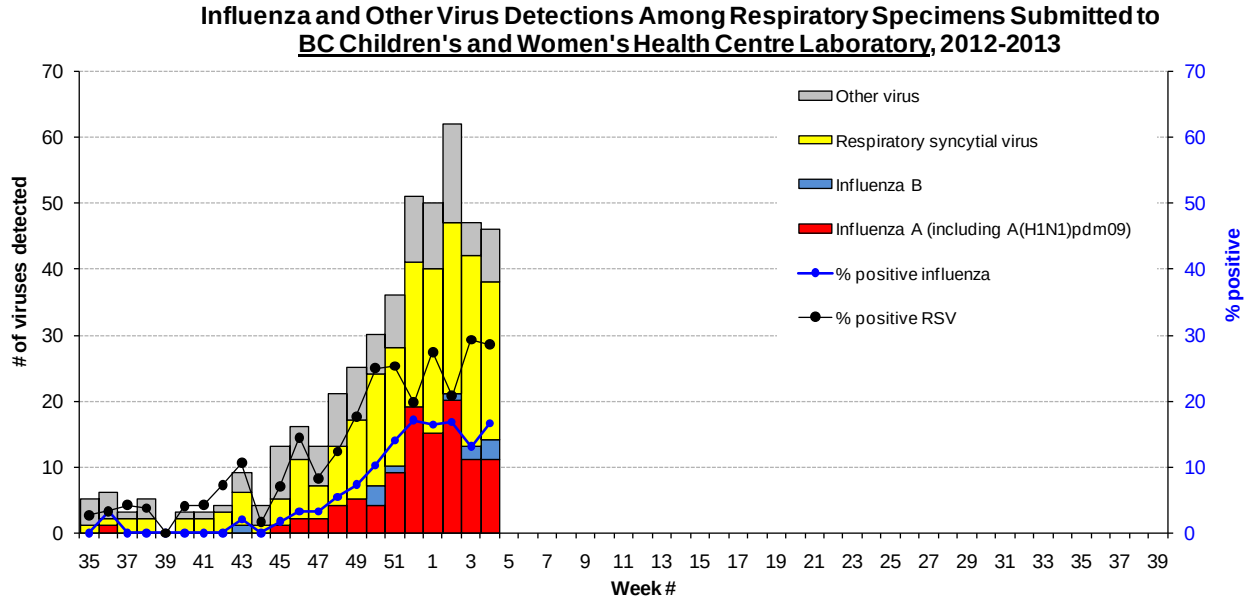


Laboratory Reports

In week 4, five hundred and fifty-eight specimens were tested at the BC Public Health Microbiology & Reference Laboratory, PHSA. Among them, 213 (38.2%) were positive for influenza, including 192 influenza A from all Health Authorities [89 A/H3N2, 16 A(H1N1)pdm09, 87 A (subtype pending)], and 21 influenza B from all HA except Northern. A small increase in the contribution of influenza B was noted over the past four weeks (from 1% to 4% of influenza detections). Among other respiratory viruses, RSV continued to be the most common detection (50/558, 9%). Other respiratory viruses were also sporadically detected. Influenza remains the most likely cause of acute respiratory illness for which testing was undertaken during week 4. However, the continuing high level of influenza positives may partially reflect the clustering of specimens submitted from facility outbreaks.



In week 4, BC Children's and Women's Health Centre Laboratory tested 84 respiratory specimens, of which 14 (16.7%) were positive for influenza viruses (higher than the previous week), including 11 influenza A (un-subtyped) and 3 influenza B. RSV (24/84, 28.6%) remained the most common detection. Other respiratory viruses were also sporadically detected.

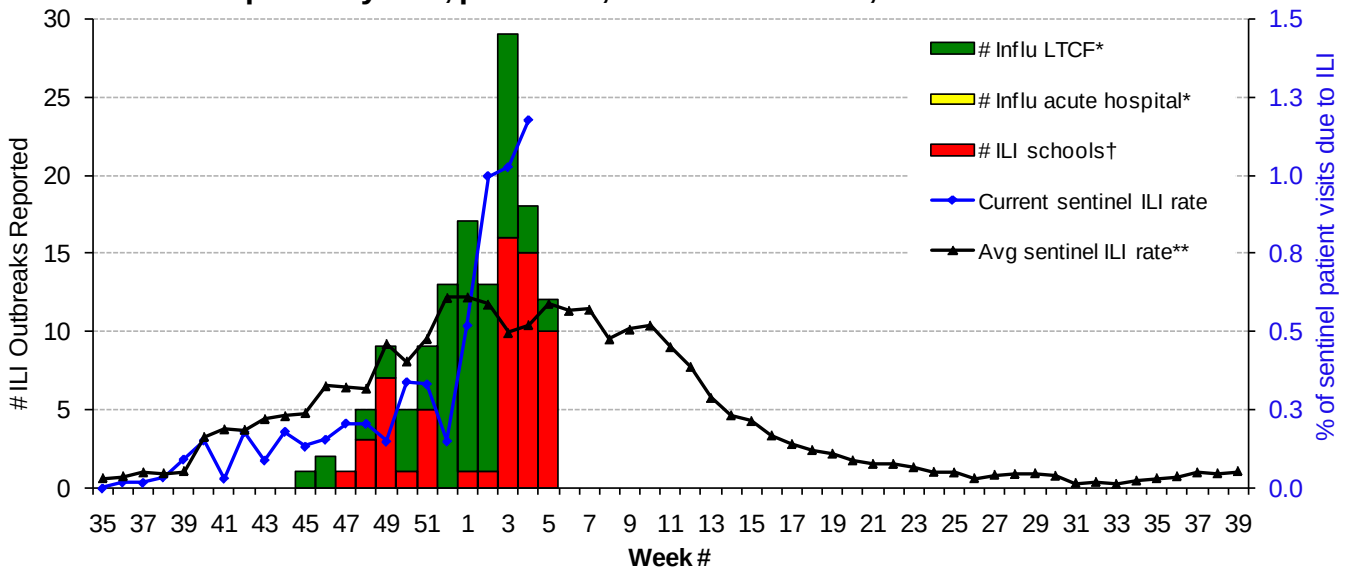


Data provided by Virology Department at Children's & Women's Health Centre of BC

ILI Outbreaks

During week 4, 8 ILI outbreaks were reported from long-term care facilities (LTCF), including 3 lab-confirmed influenza A and 5 with pending or negative lab result. 15 school ILI outbreaks (unknown pathogen) were further reported in week 4. In the beginning of week 5, 3 outbreaks from LTCF and 10 school ILI outbreaks (unknown pathogen) have been reported. To date, 74 lab-confirmed influenza outbreaks have thus been reported from LTCFs in BC in the current season since week 40 (30 September 2012): 32 in Fraser, 20 in Interior, 9 in Vancouver Coastal, 6 in Northern, and 7 in Vancouver Island Health Authority.

Number of Influenza and Influenza-Like Illness (ILI) Outbreaks Reported, Compared to Current Sentinel ILI Rate and Average Sentinel ILI Rate for past 10 years, per Week, British Columbia, 2012-2013 season



* Facility **influenza** outbreak defined as 2 or more ILI cases within 7-day period, with at least one case **laboratory-confirmed** as influenza.
† School **ILI** outbreak defined as >10% absenteeism on any day, most likely due to ILI.
** Historical values exclude 2008-09 and 2009-10 seasons due to atypical seasonality.

FluWatch

In week 3 (January 13 to January 19, 2013), the percentage of positive laboratory tests for influenza declined for the third week in a row. Influenza A/H3N2 continued to be the predominant subtype in Canada. Although many regions across Canada continued to report widespread and localized influenza activity, the number of LTCF influenza outbreaks declined compared to the previous week. The ILI consultation rate decreased but continued to be above the expected range for this time of year. www.phac-aspc.gc.ca/fluwatch/

National Microbiology Laboratory (NML): Strain Characterization

From September 1, 2012 to Jan. 31, 2013, 372 isolates were collected from provincial and hospital labs and characterized at the NML as follows:

269 A/Victoria/361/2011-like (H3N2)[¶] from NFLD, PEI, NS, NB, QUE, ONT, MAN, SASK, ALTA and BC;
45 A/California/07/2009-like [A(H1N1)pdm09]* from NB, QUE, ONT and SASK;
11 B/Brisbane/60/2008-like** from QUE, ONT, MAN, and SASK;
47 B/Wisconsin/01/2010-like[†] from NB, QUE, ONT, SASK and BC;

[¶] indicates a strain match to the recommended H3N2 component for the 2012-2013 northern hemisphere influenza vaccine
† belongs to the B Yamagata lineage, and is the recommended influenza B component for the 2012-2013 northern hemisphere influenza vaccine.
* indicates a strain match to the recommended H1N1 component for the 2012-2013 northern hemisphere influenza vaccine.
** belongs to the B Victoria lineage, which was the recommended influenza B component for the 2011-2012 northern hemisphere influenza vaccine.

NML: Antiviral Resistance

From September 1, 2012 to January 31, 2013, drug susceptibility testing was performed at the NML for influenza A/H3N2 (oseltamivir: 241; zanamivir: 241; amantadine: 437), A(H1N1)pdm09 (oseltamivir: 40; zanamivir: 39; amantadine: 42), and influenza B isolates (oseltamivir: 48; zanamivir: 48). The results indicated that all isolates were sensitive to oseltamivir and zanamivir, while all influenza A isolates were resistant to amantadine.

Interim Influenza Vaccine Effectiveness Results (Canada, USA, UK)

Recently, Canada, the United States, and the United Kingdom have published interim mid-season 2012-2013 influenza vaccine effectiveness (VE) results. While the proportions of influenza types and subtypes circulating in the United States, Canada, and the United Kingdom this season have varied, generally each study found moderate protection from the vaccine suggesting vaccine reduces the risk of medically attended laboratory-confirmed influenza by about half.
Canada: www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20394
USA: www.cdc.gov/MMWr/preview/mmwrhtml/mm62e0111a1.htm?s_cid=mm62e0111a1_w
UK: www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20393

INTERNATIONAL

USA: during week 3 (January 13-19, 2013), influenza activity remained elevated in the United States but decreased in some areas. The proportion of outpatient visits for influenza-like illness declined slightly to 4.3% but remained above the national baseline of 2.2%. The percentage of specimens testing positive continued to decline; 3,129 (26%) influenza viruses were detected, including 80% influenza A viruses (almost exclusively A/H3N2 among those subtyped), and 19.6% influenza B. The US CDC's weekly influenza surveillance report is available at: www.cdc.gov/flu/weekly.
Across **Europe** (ECDC report to 18 January 2013), influenza activity continued to increase, particularly in the north west. Influenza A and B continued to co-circulate. About half of all influenza detections in the current week (a high percentage and similar to the previous two weeks) were type B, and half type A [of which approximately half among those subtyped were A(H1N1)pdm09 and half A/H3N2].
ecdc.europa.eu/en/publications/Publications/130118_SUR_Weekly_Influenza_Surveillance_Overview.pdf
www.euroflu.org/
In temperate **Asia** (WHO influenza update of 18 Jan 2013), ILI activity has been on the increase. Among influenza lab detections, influenza A predominated [60% A/H3N2 and 40% A(H1N1)pdm09]. Influenza activity in most of the rest of Asia and the southern hemisphere was at inter-seasonal levels.
www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/index.html

Avian Influenza

The WHO and the Cambodian MoH jointly reported five cases of avian influenza A/H5N1 so far in 2013. The first case was an infant boy who recovered. The second was a teen girl who died in hospital after an illness of 10 days. One adult male and two females (one under 2 years old, the other under 10) died in hospital within two weeks of developing symptoms. All were considered likely to have come in contact with (possibly ill) poultry.
www.wpro.who.int/mediacentre/releases/2013/20130125
www.wpro.who.int/mediacentre/releases/2013/20130129

WHO Recommendations for 2012-13 Northern Hemisphere Influenza Vaccine

On 23 February 2012, the WHO announced the recommended strain components for the 2012-13 northern hemisphere vaccine:

A/California/7/2009 (H1N1)pdm09 virus
A/Victoria/361/2011 (H3N2)-like virus*
B/Wisconsin/1/2010 (Yamagata lineage)-like virus*

* these two of the three recommended components are different from the northern hemisphere seasonal TIV vaccines produced and administered in 2010-11 and 2011-2012. For further details, see:
www.who.int/influenza/vaccines/virus/recommendations/2012_13_north/en/index.html

Contact Us:

Communicable Disease Prevention and Control (CDPACS):
BC Centre for Disease Control (BCCDC)

List of Acronyms

ACF: Acute Care Facility
AI: Avian influenza
FHA: Fraser Health Authority
HBoV: Human bocavirus
HMPV: Human metapneumovirus
HSDA: Health Service Delivery Area
IHA: Interior Health Authority
ILI: Influenza-Like Illness
LTCF: Long-Term Care Facility
MSP: BC Medical Services Plan
NHA: Northern Health Authority
NML: National Microbiological Laboratory
A(H1N1)pdm09: Pandemic H1N1 influenza
RSV: Respiratory syncytial virus
VCHA: Vancouver Coastal Health Authority
VIHA: Vancouver Island Health Authority
WHO: World Health Organization

Web Sites

1. Influenza Web Sites

Canada – Flu Watch: www.phac-aspc.gc.ca/fluwatch/
Washington State Flu Updates: www.doh.wa.gov/EHSPHL/Epidemiology/CD/fluupdate.pdf
USA Weekly Surveillance reports: www.cdc.gov/flu/weekly/
European Influenza Surveillance Scheme: ecdc.europa.eu/EN/HEALTHTOPICS/SEASONAL_INFLUENZA/EPIDEMIOLOGICAL_DATA/Pages/Weekly_Influenza_Surveillance_Overview.aspx
WHO – Global Influenza Programme: www.who.int/csr/disease/influenza/mission/
WHO – Weekly Epidemiological Record: www.who.int/wer/en/
Influenza Centre (Australia): www.influenzacentre.org/
Australian Influenza Report: www.health.gov.au/internet/main/publishing.nsf/content/cda-surveil-ozflu-flucurr.htm
New Zealand Influenza Surveillance Reports: www.surv.esr.cri.nz/virology/influenza_weekly_update.php

2. Avian Influenza Web Sites

World Health Organization – Avian Influenza: www.who.int/csr/disease/avian_influenza/en/
World Organization for Animal Health: www.oie.int/eng/en_index.htm

3. This Report On-line: www.bccdc.ca/dis-cond/DiseaseStatsReports/influSurveillanceReports.htm

version: 26 Oct 2011

Influenza-Like Illness (ILI) Outbreak Summary Report Form

Please complete and email to ilioutbreak@bccdc.ca

Note: This form is for provincial surveillance purposes.
Please notify your local health unit per local guidelines/requirements.

ILI: Acute onset of respiratory illness with fever and cough and with one or more of the following: sore throat, arthralgia, myalgia, or prostration which *could* be due to influenza virus. In children under 5, gastrointestinal symptoms may also be present. In patients under 5 or 65 and older, fever may not be prominent.

Schools and work site outbreak: greater than 10% absenteeism on any day, most likely due to ILI.

Residential institutions (facilities) outbreak: two or more cases of ILI within a seven-day period.

A

Reporting Information

Health unit/medical health officer notified? ☐ *Yes* ☐ *No*

Person Reporting: _____ Title: _____

Contact Phone: _____ Email: _____

Health Authority: _____ HSDA: _____

Full Facility Name: _____

Is this report:

☐ First Notification *(complete section **B** below; Section **D** if available)*

☐ Update *(complete section **C** below; Section **D** if available)*

☐ Outbreak Over *(complete section **C** below; Section **D** if available)*

B

First Notification

Type of facility: ☐ LTCF ☐ Acute Care Hospital ☐ Senior's Residence

(if ward or wing, please specify name/number: _____)

☐ Workplace ☐ School (grades:) ☐ Other (_____)

Date of onset of first case of ILI (dd/mm/yyyy): DD / MMM / YYYY

Numbers to date	Residents/Students	Staff
Total		
With ILI		
Hospitalized		
Died		

C

Update AND Outbreak Declared Over

Date of onset for most recent case of ILI (dd/mm/yyyy): DD / MMM / YYYY

If over, date outbreak declared over (dd/mm/yyyy): DD / MMM / YYYY

Numbers to date	Residents/Students	Staff
Total		
With ILI		
Hospitalized		
Died		

D

Laboratory Information

Specimen(s) submitted? ☐ Yes (location: _____) ☐ No ☐ Don't know

If yes, organism identified? ☐ Yes (specify: _____) ☐ No ☐ Don't know

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